Going to College

• Whom does it pay to go to college
• When does it pay to go to college?

Going to College

• College is an Investment in Human Capital
  – The more you know, the more you earn

Going to College

• College is an Investment in Human Capital
  – The more you know, the more you earn
  – Thus college is not viewed as certification

Going to College

• A HS graduate earns $H_1, H_2, H_3, \ldots$
• A college graduate earns $C_1, C_2, C_3, \ldots$
Going to College

- A HS graduate earns $H_1, H_2, H_3, \ldots$
- A college graduate earns $C_1, C_2, C_3, \ldots$
- But
  - College takes time:
  - It delays the entry into the labor market.

- The present values are
  
  \[ PV_H = \frac{H_1}{1+r} + \frac{H_2}{(1+r)^2} + \frac{H_3}{(1+r)^3} + \frac{H_4}{(1+r)^4} + \ldots \]

\[ PV_C = \frac{C_1}{1+r} + \frac{C_2}{(1+r)^2} + \frac{C_3}{(1+r)^3} + \frac{C_4}{(1+r)^4} + \ldots \]

Some Simplifying Assumptions

- People go to standard four-year colleges.
- After graduating, they have infinite lives
- High school graduates earn $I_h$ each year and college graduates earn $I_c$ each year.

\[ PV_H = \frac{I_h}{r} \]

\[ PV_C = \frac{I_c}{r(1+r)^4} \]

- We account for time delay
- We don’t account for tuition, books, etc.
Equilibrium

- Equilibrium requires that \( PV^H = PV^C \)

\[
I_h/r = 1/c/[r(1+r)^4]
\]

\[
I_h = I_c/[r(1+r)^4]
\]

The Crucial Ratio

<table>
<thead>
<tr>
<th>Annual Interest Rate</th>
<th>( \frac{I_h}{I_c} )</th>
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<tbody>
<tr>
<td>5.0%</td>
<td>1.22</td>
</tr>
<tr>
<td>7.5%</td>
<td>1.34</td>
</tr>
<tr>
<td>10.0%</td>
<td>1.46</td>
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</table>
Implications of the Model

• The wage differential is required to justify the investment. The differential changes with real interest rates.

• The highest return from going to college is earned by going when you are young.

Well, sometimes. MBA programs like experience.

End

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